HJR 622 STUDY: CHESAPEAKE BAY PRESERVATION ACT - EXPANSION

RESOLVED FURTHER, That the Chesapeake Bay Local Assistance Department be requested to submit to the Commission for inclusion in Commission's interim report (i) **an assessment of the benefits to the environment, along with the costs and effects to state and local governments of extending the Act to include localities outside of "Tidewater Virginia" that are within the Chesapeake Bay watershed**; (ii) **the potential need for changes to existing regulations to reflect differences in the topography and geology for such an expansion; and (iii) the financial resources needed in the form of state implementation grants to local governments for such an expansion**. The Department shall complete and submit its findings and recommendations to the Commission by October 20, 2001.

II. PURPOSE FOR THE STUDY

The Chesapeake Bay Local Assistance Department (CBLAD) is pleased to have been charged with examining the potential impacts and implications associated with a possible expansion of the Commonwealth's Chesapeake Bay Preservation Act (the Act) throughout the Virginia portion of the Chesapeake Bay Watershed. In undertaking this task and presenting this report, CBLAD has been able to address its charge with regard to protection and enhancement of all State waters within the watershed and in context with the myriad of federal, state, and local water quality activities and programs that currently exist. This report not only addresses the potential implications for local government and state agencies but also for advancing the art and science of water quality protection and enhancement throughout the Commonwealth. Thus, regardless of the disposition of the issue that generated the reason for this report, its content will be of benefit as CBLAD continues to refine and enhance the Commonwealth's Bay Act Program and to assist in restoring the water quality of the Chesapeake Bay and its tributaries.

Origin of the study and its status: This study was undertaken through a directive of the 2001 General Assembly. During the 2001 Session, Senator Williams introduced SB 821 calling for an immediate expansion of Act to the balance of the Bay watershed. Concurrently, HJ 622 (Dillard) and SJ 434 (Whipple) were under deliberation. These companion bills called for a Joint Legislative Audit and Review Commission (JLARC) study on the implementation of the Act as it is implemented in Tidewater Virginia. During deliberations on SB 821, questions were raised regarding the costs to local government and the State; what types of changes would be required to the Act's regulations given the different topology and character of the proposed expansion area; and what would be the effects upon local governments and the environment itself.

SB 821 was passed-by-indefinitely (PBI) by the Senate Committee on Agriculture, Conservation, and Natural Resources only after a commitment was made to include a study of the potential expansion as a part of the companion bills calling for the JLARC study. Accordingly, HJ 622 was amended on the Senate floor by Senator Williams and passed. The language in HJ 622 pertaining to the expansion study is as follows:

> "RESOLVED FURTHER, That the Chesapeake Bay Local Assistance Department be requested to submit to the Commission for inclusion in Commission's interim report (i) an assessment of the benefits to the environment, along with the costs and effects to state and local governments of extending the Act to include localities outside of "Tidewater Virginia" that are within the Chesapeake Bay watershed; (ii) the potential need for changes to existing regulations to reflect differences in the topography and geology for such an expansion; and (iii) the financial resources needed in the form of state implementation grants to local governments for such an expansion. The Department shall complete and submit its findings and recommendations to the Commission by October 20, 2001."

The submission of this report to JLARC completes the CBLAD obligation under HJ 622. JLARC is to incorporate the information in this report in its interim report to the Governor and the 2002 General Assembly. CBLAD stands ready and willing to assist the General Assembly with any appropriate follow-up studies or to assist in the preparation of any legislation that might be desired for consideration in the 2002 General Assembly.

Related legislative activities: In addition to HJ 622, there are four other legislative studies that have a direct effect upon a potential expansion of the Act. HJ 161 (2000 Session) directed the State Water Commission to study karst groundwater monitoring and protection in the Shenandoah Valley. The Commission's final findings and recommendations are being prepared concurrent with this (HJ 622) study and will not be available until after this study is submitted to JLARC. This study is of direct relevance since the Act and its Regulations address the identification and protection of potable water supplies in addition to surface flow in tributaries and streams. Please refer to Chapter IV for additional information about karst topology.

HJ 771 established a joint subcommittee to study the organization, structure, regulations, and policies of the Department of Health and the Department of Environmental Quality relating to the management and treatment of wastewater. The resolution cites that "the Commonwealth has more than 750,000 septic drainfields that will fail with age, posing a serious threat to the environment" and other items pertaining to septic systems and alternative technologies thereto. This study is of relevance since one of the eleven performance standards in the Act's Regulations deals with septic system management. The subcommittee's written findings and report are being prepared concurrent with this (HJ 622) study and will not be available until after this study is submitted to JLARC. Please refer to Chapter IV for additional information about septic systems and the Act.

SJ 438 directs the Commission on the Future of Virginia's Environment (SJ 373) to study the implementation of local erosion and sediment control programs and local stormwater management programs. These topics are of relevance since performance standards in the Act's Regulations address local erosion and sediment control programs and stormwater management programs. In the latter, water quality controls – through best management practices – are required in order to limit off-site pollutant flow to average pre-

development conditions. The Commission's written findings and report are being prepared concurrent with this (HJ 622) study and will not be available until after this study is submitted to JLARC. Please refer to Chapter IV for additional information about the erosion and sediment control aspects of the Act's Regulations and for additional information about the stormwater management aspects of the Act's Regulations

SJ 373 continues the Commission Studying the Future of Virginia's Environment. The Commission was initially established in 1996 and has developed an expertise in environmental matters. As noted in SJ 373, the Commission has established subcommittees to receive testimony on "such timely environmental issues as the tributary strategies, the total maximum daily load (TMDL) requirements, land use and growth" and other items which are intricate to the Act and its Regulations. While CBLAD has monitored and participated in the activities of the Commission during this study period, the Commission's written findings and report are being prepared concurrent with this (HJ 622) study and will not be available until after this study is submitted to JLARC.

Water Quality – The Constitutional Charge: Article XI of the Virginia Constitution provides the Commonwealth's overall policy statement dealing with the environment with a specific charge to protect state waters from pollution, impairment, or destruction.

> To the end that the people have clean air, pure water, and the use and enjoyment for creation of adequate public lands, waters and other natural resources, it shall be the policy of the Commonwealth to conserve, develop and utilize its natural resources, its public lands and its historic sites and buildings.
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> Further, it shall be the Commonwealth's policy to protect its atmosphere, lands and waters from pollution, impairment or destruction for the benefit, enjoyment and general welfare of the people of the Commonwealth. Article IX, Virginia Constitution

Water Quality – Directives and Regulations:

The Federal Clean Water Act establishes, among other items, the basis for water quality standards in Virginia. This Act also provides methodologies for dealing with waterways and water bodies that do not meet the standards. One of these tools is the Total Maximum Daily Loads (TMDL) program. Please refer to Chapter IV, for more information on the TMDL program and its relationship to the Act and its Regulations.

Another component of the Commonwealth's response to federal water quality directives and requirements is its Non-point Source (NPS) Program that operates under the auspices of the Secretary of Natural Resources (SONR). It is a multi-faceted program that sets forth objectives relating to water quality. Many of those objectives are implemented through local government actions that are required elements of the Act and its Regulations. Please refer to Chapter IV, for a discussion of the interface between the NPS program and the Act and its Regulations.

Water Quality – The Chesapeake Bay Agreement:

The Chesapeake Bay Agreement (Agreement) is a compact made among the states of Virginia, Maryland, Pennsylvania, the District of Columbia, the Environmental Protection Agency, and the Chesapeake Bay Commission. The initial agreement was signed in 1983. In 1987 the Agreement was revised to, among other items, contain a goal to "plan for and manage the adverse environmental effects of human population growth and land development in the Chesapeake Bay Watershed". In support of that goal, the Executive Council adopted *Chesapeake Bay Watershed Development Policies and Guidelines* through an agreement commitment report dated January 1989. The Virginia program adequately addresses the essence of that agreement, i.e. appropriate state requirements, through the performance criteria of the Act's Regulations.

The Executive Council's policies and guidelines were to be applied watershed-wide for all state projects and encouraged for localities. In Virginia that did not occur since the Bay Act affects only the 84 local units of government that are described as Tidewater Virginia. Expansion of the Bay Act to the balance of the watershed would fully implement the provisions of the commitment report in the same manner as for the Tidewater area.

In 2000, the multi-jurisdictional partnership was reaffirmed and the Agreement was substantially revised to incorporate over 80 specific commitments under five major categories. Within the major category of Sound Land Use, the sub-category of Development, Redevelopment and Revitalization contains 13 commitments, the majority of which specifically relate to aspects of Virginia's Act, its Regulations, and the CBLAD work program. As pointed out in Chapter IV, expansion of the Act will provide a mechanism and opportunities for the Commonwealth to meet its obligations with regard to those commitments.

Water Quality – Chesapeake Bay Act and its Regulations:

The Chesapeake Bay Preservation Act (§ 10.1-2100, et. seq.) and the Chesapeake Bay Preservation Area Designation and Management Regulations (§ 9 VAC 10-20-10, et. seq.) is a critical element of Virginia's multifaceted response to the Chesapeake Bay Agreement and is a major component of the overall NPS Program.

The Virginia General Assembly enacted the Chesapeake Bay Preservation Act in 1988. The Act established a cooperative program between state and local government aimed at reducing non-point source pollution. The program created to implement the Act is designed to improve water quality in the Chesapeake Bay and its tributaries by requiring wise resource management practices in the use and development of environmentally sensitive land features. At the heart of the Act is the idea that land can be used and developed in ways that minimize impact on water quality.

There are several written descriptions of the Act and its Regulations. The following is excerpted from the Final Proposal to Incorporate the Chesapeake Bay Act Program into the Virginia Coastal Resources Management Program, 1996. "Simply stated, the program requires Tidewater localities to prepare inventories of environmentally-sensitive land features, to designate Chesapeake Bay Preservation Areas based upon the findings of that data collection and analyses, and then to amend their local land use management systems, including zoning and subdivision ordinances and comprehensive plans, in order to protect water quality (§ 10.1-2109 of the act). Specifically, local governments must adopt and implement performance criteria to apply within Chesapeake Bay Preservation Areas. The Board, in developing local program requirements, has utilized a resource-based approach which recognizes the differences between various land forms and treats them differently, according to the unique characteristics which they possess. Land use and development are regulated where necessary and in a degree appropriate to the type of land form on which they are located. The Act allows flexibility to meet local needs, both in terms of existing water quality conditions and unique land characteristics and in terms of the existing regulatory system, yet provides uniform standards for use throughout Tidewater to ensure a basic level of consistency among the various local programs." The report provides a very complete description of all aspects of the Bay Act Program. A copy of the full report is provided in the Appendices.

As noted in the preceding materials, the Act and Regulations have a direct interface with other water quality planning programs and activities. This interface is described below and is more fully addressed in Chapter IV. For localities under the Act, the threshold for the statewide erosion and sediment control requirement compliance is reduced from 10,000 square feet of land disturbance to 2,500 square feet, thus capturing many more land disturbing activities. Water quality requirements, including stormwater management, are mandatory in the 84 Tidewater localities, whereas the State's voluntary stormwater management enabling legislation focuses upon control of quantity and is permissive. In addition to the new (2001) non-tidal wetland permit requirements, wetlands connected by surface flow to tributary streams and non-tidal wetlands are protected as Resource Protection Area (RPA) features; and, other wetlands may be included by a locality as a protected RPA feature. Many of the suggested actions contained within the various tributary strategies, particularly those dealing with land use management, are enabled under the Act. Finally, as stated above, it is a critical element of Virginia's multifaceted response to the Chesapeake Bay Agreement especially with regard to the Sound Land Use (4.0) commitments.

Growth and Development in the Virginia portion of the Chesapeake Bay Watershed and Its Implications for Water Quality:

It is not sufficient to just clean-up impaired waters. Continuing growth and land use change creates additional pollution that must be handled appropriately so that gains made by clean-up efforts are not lost. This point was clearly expressed in a presentation by CBLAD Executive Director to the Senate Committee on Agriculture, Conservation and Natural Resources in a hearing during the 2001 Session. His remarks follow. "In January

1989, the Chesapeake Executive Council published a report on projected Population, Growth and Development in the watershed by the Year 2020. At that time, the study panel projected the population of the entire basin to increase from an estimated 13.6 million in 1990 to 16.2 million in 2020. In fact, today's estimate of the bay watershed population is 15 million people, and the estimate for the year 2020 has grown to a projected 18 million people. More important, in 1989 Virginia's population was estimated to increase by 32%, whereas Maryland's population was expect to grow by only 18%, Pennsylvania's by only 8%, and the District of Columbia's was expected to remain static.

Much of the projected population growth in Virginia was originally expected to occur within the coastal crescent, from Washington D.C. through Richmond to the Hampton Roads region. However, we now expect a significant portion of that growth to also occur in other population centers along the Interstate 81 corridor in the Shenandoah Valley and along major connectors such as U.S. Route 29 between Washington and Lynchburg, along Interstate 66 between Washington and Winchester, and along Interstate 81 from Winchester through Staunton. The Bay Program estimates that the populations of some non-coastal communities, including Loudoun County, Fauquier County, Culpeper County and Greene County, are expected to double by the year 2020.

Furthermore, population growth statistics don't tell the whole story. The Richmond Times-Dispatch reported in the Sunday, January 14, 2000 edition that the latest USDA National Resources Inventory shows that between 1982 and 1997, farm fields and forests were converted to urban, suburban and industrial uses nearly twice as fast as the population grew. The developed portion of Virginia grew from 1.8 million acres in 1982 to 2.6 million acres in 1997 (43% increase). However, during that same period population expanded from 5.5 million people to 6.7 million (23%).

We know that pollution loads can be directly related to increases in impervious surfaces, such as roads, parking lots, sidewalks and rooftops. As impervious surfaces are added in response to the population increase, the load of pollution in storm runoff will increase proportionately. If we expect to maintain the cap on pollution loads, as we have committed to do, then we will have to engage more aggressively in pollution control efforts in all areas where significant growth is expected.

This is even more true in the western part of the Commonwealth, where the steeper topography and karst geology make land development, farming and logging more difficult and the risk of pollution even greater. Soil erosion and sediment pollution is a good example.

Virginia's Tributary Strategies, developed by stakeholders for the James, York and Rappahannock River basins, all identified excess sediment as a major water quality and habitat problem in the tidal portion of these rivers. The Tributary Strategies have set ambitious goals for reducing the amount of sediment entering the Bay and its tributaries, and maintaining those levels of sediment even in the face of continued population growth and development. In addition, the Chesapeake 2000 Agreement, signed by Governor

Gilmore last summer, also commits Virginia to improved management of sediment loads to the Bay as part of our partnership with the other Bay states.

However, according to EPA's computer models, the majority of this sediment comes from areas west of the fall line – areas not currently covered by the Bay Act. If you decide to expand the Bay Act to cover the remaining 65 percent of the land in the watershed, the flow of sediment would be substantially reduced.

Much of the expected increase in pollution loads will be associated with growth and development, one the most effective ways to provide protection is through the kinds of local land use regulations implemented under the Bay Act. The main goal of the program is 'no-net increase' of non-point pollution from land development projects. This is exactly what the cap commitment demands. The program also has goals to reduce current pollution loads from agricultural and silvicultural lands and from redevelopment projects."

The recently issued 2001 State of the Bay Report prepared by the Chesapeake Bay Foundation finds that the ecological health of the Bay has declined over the past year for the first time in four years. The report stated that despite efforts to stem the loss of farmland and open space, growth in the watershed was undercutting restoration efforts. While there are individual efforts and programs, (such as the E&SC, Ag-Cost Share BMPs, and stormwater management) they are not all mandatory nor do they realize their maximum efficiency when applied in a piecemeal manner. The issues of growth are complex and comprehensive in nature. A comprehensive program, such as the eleven point (performance criteria) and planning program, consistent with the mandatory provisions of the Act, and implemented by local government concurrent with the impacts of growth and development would be useful in order to adequately address the on-going nature of enhancing and maintaining the quality of the waters of the Commonwealth.

In addition, such a program could effectively be applied throughout the entirety of the Chesapeake Bay watershed. Such an application is consistent with the obligations incurred in the 1987 Chesapeake Bay Agreement and with the scope and approach of the commitments in the revised 2000 Agreement.